REMARKS

The Official Action mailed January 8, 2007, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Filed concurrently herewith is a *Request for Continued Examination*. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on December 27, 2004; July 15, 2005; August 26, 2005; and November 22, 2005.

A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1-67 are pending in the present application, of which claims 1-4, 21, 22, 38 and 51 are independent. Dependent claims 17-20 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action objects to claims 17-20 under 37 CFR § 1.75(c) asserting that "[c]laims 17-20 require that the heating take place at an atmospheric pressure, however, such is required by the independent claims 1-4 and therefore the limitation does not further limit the independent claims" (page 4, Paper No. 20061228). In response, the Applicant has amended claims 17-20 to recite that the inert gas comprises argon, which further limits independent claims 1-4, respectively. Accordingly, reconsideration and withdrawal of the objections under 37 CFR § 1.75(c) are in order and respectfully requested.

Paragraphs 4-20 of the Official Action reject claims 1-67 as obvious based on the combination of U.S. Patent No. 5,902,688 to Antoniadis, U.S. Patent No. 6,049,167 to Onitsuka and U.S. Patent No. 5,534,314 to Wadley, either alone or in combination with one or more of the following: U.S. Patent No. 5,945,967 to Rallison, U.S. Patent No.

6,495,198 to Peng, U.S. Patent No. 6,537,607 to Swanson, U.S. Patent No. 5,921,836 to Nanto, U.S. Patent No. 4,672,265 to Eguchi, and U.S. Patent No. 6,294,892 to Utsugi. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 1-4, 21, 22, 38 and 51 recite, among other features, evaporating an organic electroluminescence material in an inert gas atmosphere at an atmospheric pressure by heating an evaporation cell. For the reasons provided below, Antoniadis, Onitsuka and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi do not teach or suggest the above-referenced features of the present invention.

The Official Action asserts the following (at pages 3 and 6, Paper No. 20061228):

> Wadley '314 teaches an evaporation method in which a crucible (i.e. an evaporation cell) is filled with an evaporation source and directed to the deposition substrate in the presence of an inert gas at up to atmospheric pressure (col. 5, lines 50-64; col. 11, lines 8-12). While Wadley is directed to e-beam evaporation using a water-cooled crucible, Wadley clearly discloses that evaporation via resistive heaving is operable for materials that have a low melting point (column 7, lines 24-35). ... Wadley suggests evaporating using a gas to direct to the evaporant onto the substrate provides the advantage of not having to use high vacuum, which requires expensive equipment and allows for inefficient material utilization and only line of sight deposition (column 1, lines 55-65).

The Applicant respectfully disagrees and traverses the assertions in the Official Action. Wadley does not teach or suggest evaporation at atmospheric pressure by heating an evaporation cell. Wadley appears to merely teach (i) e-beam evaporation method at up to atmospheric pressure (column 5, lines 50-64; column 11, lines 8-12), (ii) that resistive heating may work well for low melting point materials; whereas, the use of an electron beam gun makes possible the rapid, efficient evaporation of any and all materials (column 7, lines 24-35), and (iii) that efficient materials deposition at extremely high rates by e-beam evaporation using a gas to direct to the evaporant was impossible because traditional e-beam evaporation was utilized only in high vacuums (column 1, lines 55-65). That is, although Wadley may teach resistive heating, Wadley fails to teach or suggest resistive heating at an atmospheric pressure. Further, in Wadley, although the e-beam evaporation may be performed at atmospheric pressure, the e-beam evaporation requires a water-cooled crucible. Accordingly, Wadley does not teach or suggest, in combination, evaporating an organic electroluminescence material in an inert gas atmosphere at an atmospheric pressure by heating an evaporation cell.

Antoniadis and Onitsuka also do not teach or suggest evaporating an organic electroluminescence material in an inert gas atmosphere at an atmospheric pressure by heating an evaporation cell. Thus, Antoniadis, Onitsuka and Wadley, either alone or in combination do not teach or suggest all the features of the claimed invention.

Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi do not cure the deficiencies in Antoniadis, Onitsuka and Wadley. The Official Action relies on Rallison to allegedly teach "that electroluminescent displays are suitable for forming video camera displays" (page 8, Paper No. 20061228), on Peng to allegedly teach "moving the substrate and organic electroluminescent sources relative to one another" (page 9, Id.), on Swanson to allegedly teach "patterning without using a mask" (Id.), on Nanto to allegedly teach "moving the deposition sources" (page 11, Id.), on Eguchi to allegedly teach "that the evaporation cell is made of tungsten" (Id.) and on Utsugi to allegedly teach "that [the claimed] pixel dimensions are suitable for organic EL displays" (page 12, Id.). However, Antoniadis, Onitsuka and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi, do not teach or suggest evaporating an organic electroluminescence material in an inert gas atmosphere at an atmospheric pressure by heating an evaporation cell.

Since Antoniadis, Onitsuka and Wadley, either alone or in combination with one or more of Rallison, Peng, Swanson, Nanto, Eguchi and Utsugi, do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Further, as noted in detail at pages 17-19 of the *Amendment* filed October 23, 2006, the Applicant respectfully submits that the alleged combination of the deposition method using the e-beam evaporation of Wadley with Antoniadis and Onitsuka is not appropriate. In the "Response to Arguments" section, apparently in response to the Applicant's arguments traversing motivation, the Official Action simply asserts that "the Wadley reference discloses the limitations of using a high vacuum, which requires expensive equipment and allows for inefficient material utilization and only line of sight deposition and one of ordinary skill in the art would have been motivated to reap the benefits of improved cost and efficient material utilization" (page 3, Paper No. 20061228). The assertion in the "Response to Arguments" section does not appear to address all the Applicant's detailed arguments. For example, "improved cost and efficient material utilization" do not explain why one of ordinary skill in the art at the time

of the present invention would have been motivated to apply the teachings of Wadley, which appear to relate to reactive materials and/or refractory materials, to Antoniadis or Onitsuka, which appear to relate to electroluminescent materials. The Applicant respectfully requests reconsideration of the alleged motivation for the reasons of record.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Eric J. Robinson
Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C.
PMB 955
21010 Southbank Street
Potomac Falls, Virginia 20165
(571) 434-6789